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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,062	02/15/2002	Karl J. Wood	GB010035	1604

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EXAMINER

REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/077,062	Applicant(s) WOOD ET AL.	
	Examiner Erick Rekstad	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,9-14,16-18,20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9-14,16-18,20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a Final Rejection for Application no. 10/077,062 in response to the amendment filed on December 29, 2006 wherein claims 1-3, 5-7, 9-14, 16-18, 20 and 22 are presented for examination.

Response to Arguments

Applicant's arguments filed December 29, 2006 have been fully considered but they are not persuasive. With respect to claims 1, 13 and 22, Applicant argues that Shapiro does not teach the use of a "single user control for adjusting" the two distances of the stereoscopic image. The Examiner respectfully disagrees. The user control is the Data processor (50, Fig. 12a-b) which adjusts the distances using the user's location and the user's interocular distance. Therefore the data processor satisfies the requirement of a user control as the processor makes adjustments based on the user.

The Applicant further argues that Shapiro admits the system cannot adequately adjust to different interocular distances (Page 7 Lines 17-19). No citation has been made to support this statement and it is further noted by the Examiner that Shapiro specifically teaches the use of the system for adjusting for different interocular distances (Col 11 Lines 11-22).

It is viewed by the examiner that the Applicant is assuming the "single user control" is perhaps a button, joystick or some other physical adjuster the user touches to control the display as in claim 5. Such a feature is not claimed in independent claims 1, 13 and 22. Further, claim 5 is rejected in further view of Lemelson.

With respect to claim 22, the applicant argues Shapiro does not teach the "plurality of lenticules having respective parallel axes extending transversely to the plurality of columns and rows of the display elements". The Examiner respectfully disagrees. As shown in Figure 20, the lenticular screen (62) is lying across the columns and rows of the display (60) (Col 13 Lines 30-38). If the Applicant is attempting to claim the specific layout as shown in Figure 4 of the application, it is suggested by the examiner to further limit the claim to the specifics of that layout (Pages 6-8).

In regards to the Applicants arguments related to claims 5, 7 and 11, it is argued that Lemelson teaches only the adjustment of the width of lines. The Examiner respectfully disagrees as Lemelson clearly shows two distances being adjusted (Figs. 5 and 6). One distance is the shift value and the other distance is the width value (Col 7 Lines 51-58 and Col 8 Lines 5-17). Further Lemelson teaches the adjusting of both distances with a knob (Col 10 Lines 35-40, Fig. 11).

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 9, 10, 12-14, 16, 17, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,777,720 to Shapiro et al.

[claims 1, 3, 13 and 20]

As shown in Figures 7 and 9, Shapiro teaches an apparatus and method for producing a stereoscopic image comprising:

The display means is an auto-stereoscopic display which provides sub-images spaced from one another at a first distance along an X-axis and a second distance along a Z-axis so as to render the stereoscopic image (Col 3 Lines 30-38, Col 4 Lines 18-41, Col 5 Lines 30-38). Note, Shapiro specifically teaches the calibrating for interpupillary distances and viewing distances (Col 5 Lines 30-38).

A single user control (camera (37) and image analyzer (38) of Figure 7) operative to adjust the first and second distances of the stereoscopic image displayed by the display means wherein at least the first distance of the stereoscopic image displayed on the display means is adjusted to correspond to a distance between eyes of a user (Col 10 Lines 28-47 and Lines 59-65, Col 11 Lines 50-61, and Col 12 Lines 2-20, Figs 10, 11a-11d, 12a-b).

[claims 2, 12, 14 and 22]

Shapiro teaches the use of the adjusting for multiple types of auto-stereoscopic displays (Figs 13-20). One such display is an LCD with a lenticular screen (Col 13 Lines 30-38, Fig. 20).

[claims 9, 10, 16 and 17]

Shapiro teaches the importance of adjusting the two variables in order for people who do not meet average observer parameters may perceive the three-dimensional effect of 3D displays (Col 2 Lines 1-10). Shapiro further teaches the first parameter is for changes in the X direction, which has been shown to adjust for interpupillary distance allowing for perceived depth. The second parameter is for the Z direction which relates to viewing distance (Col 10 Lines 59-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro.

[claim 18]

As shown above for claims 1 and 13, Shapiro teaches the apparatus and method for stereoscopic display. The apparatus includes an Image analyzer (38) and a controller (16) which performs the method of Figure 9. Though Shapiro does not specifically teach the use of a program, it would have been obvious to one of ordinary skill in the art at the time of the invention that the processors would require a program to run the method (Official Notice).

Claims 5, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro in view of US Patent 6,816,158 to Lemelson et al.

[claim 5]

As shown in Figure 7, Shapiro teaches the single user control is a camera (37) and image analyzer (38) which obtains images and adapts the display based on the users position and interpupillary distance (Col 10 Lines 28-47). Shapiro does not teach a physical user control such as a knob.

Lemelson teaches an apparatus for producing a stereoscopic image comprising display means (10) for displaying an image and user control means (Fig. 11) for controlling two stereoscopic parameters (shifting and width) of the image displayed by the display means (Fig. 1, Col 7 Line 48-Col 8 Line 17); said user control means being a single control (joystick) (Col 10 Lines 26-40). Note, Lemelson specifically teaches an example of simultaneous control, where in the viewer uses the joystick to move left and back (Col 8 Lines 36-40). As shown in Figure 11, Lemelson teaches the use of a joystick (146) for use as the control means, which is functionally equivalent to a knob (Col 4 Lines 21-24 and Col 10 Lines 20-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the manual controls of Lemelson with the stereoscopic display of Shapiro in order to allow the user to determine the desired display configuration as taught by Lemelson.

[claim 7]

Lemelson further teaches a remote device (8 of Fig. 1) communicating with said user control means (Fig. 11) (Col 8 Lines 18-54 and Col 10 Lines 20-40). As shown above for claim 5, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the manual controls of Lemelson with the stereoscopic

display of Shapiro in order to allow the user to determine the desired display configuration as taught by Lemelson.

[claim 11]

Shapiro teaches the ability to adjust the display within the parameters of the system (Col 12 Lines 9-19). Shapiro is silent on the user control being at a minimum the perceived depth of the image is at a minimum and as said single user control moves from a minimum to a maximum the perceived depth of the image increases. As shown in Figure 11, the control allows for a forward and backwards movement (depth). The movement is further controlled by a LUT (Col 9 Lines 30-31 and Lines 62-63).

Lemelson further teaches the limit of the width based on the lenticular screen (Col 8 Lines 12-17). Note, the use of the LUT provides a minimum and maximum value for the depth.

As shown above for claim 5, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the manual controls of Lemelson with the stereoscopic display of Shapiro in order to allow the user to determine the desired display configuration as taught by Lemelson.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro and Lemelson as applied to claim 1 above, and further in view of US Patent 6,760,020 to Uchiyama.

[claim 6]

Shapiro teaches the apparatus of claim 1. Shapiro and Lemelson further teach the use of a manual control for a user to control the display, as shown above for claim 5.

Lemelson teaches the remote control as shown in Figures 11 and 12. Lemelson does not teach the use of a graphical icon. Uchiyama teaches the use of graphical icons to provide a user a visual of the control means (Col 11 Lines 15-29, Fig. 16). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a graphical icon for the user control in order to provide a visual of the parameters changed as taught by Uchiyama.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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